

Memorandum

Date : December 19, 1997

To : Dave Wesley, Chief
Industrial Licensing Unit

Via : Steve Hsu, Chief *S. Hsu*
Radiologic Assessment Unit

From : Roger Lupo, Health Physicist
Radiologic Assessment Unit *RKL*

Subject : Rocketdyne (California Lic. # 0015) Release of Building T363 for Unrestricted Use.

ref: Boeing letter dated March 26, 1997 from P.D. Rutherford to G. Wong

In reply to the above letter, the Radiologic Assessment Unit (RAU) has reviewed the documents SSWA-SP-0002, dated July 27, 1995 and SSWA-ZR-0002, dated June 21, 1996, and the Verification Survey Report from ORISE for Building T363, October 1996.

RAU personnel completed a confirmatory survey of Building T363 on July 30, 1996. Based on the document review, the survey results and the laboratory analysis results of the wipe samples the building T363 meets the requirements of DECON-1 for release without radiological restriction.

Attachment: Confirmation Survey of Building T363

cc cron file
etec file

Reference document(s):

1. "Building T363 Final Survey Procedure"; Rockwell International, Rocketdyne Division; document number SSWA-SP-0002 dated July 27, 1995.
2. "Final Radiological Survey Report for Build T363"; Rockwell International, Rocketdyne Division; document number SSWA-ZP-0002 dated June 21, 1996.
3. Letter to G. Wong from B.M. Oliver dated June 28, 1996 "Final Surveys of Buildings T012 and T363"
4. Letter to G. Wong from P.D. Rutherford dated March 26, 1997; "Request for Release for Use Without Radiological Restrictions, Rocketdyne SSFL Building T363".
5. "Verification Survey of Building T363 Santa Susana Field Laboratory Rockwell International Ventura County, California"; Oak Ridge Institute for Science and Education, October 1996.

Survey Personnel:

Henry Kocol, Roger Lupo

Survey Instruments:

Instrument	S/N	Detector	S/N	Calibration Date
Ludlum model 19 micro R meter	42956	internal 1x1 NaI	na	30 May 1996
Eberline ESP-2 Smart meter	00406	Ludlum 44-9 pancake G-M	043314	1 May 1996

Survey Report:

On Tuesday, July 30, Hank and Roger met with Bob Tuttle and the team from ORISE, Tim Vitkus, Ray Norton and Teresa Bright. After performing equipment checks the survey of Building T-363 began. While ORISE was performing their survey the State team performed a general survey with Ludlum model 19 Micro R meters (micro Roentgen per hour, $\mu\text{R/hr}$). The open field area surrounding the structure was surveyed at one meter above the ground, the dose rate measurements ranged from 11 $\mu\text{R/hr}$ to 15 $\mu\text{R/hr}$. Inside building T363 the range of measurements were also 11 $\mu\text{R/hr}$ to 15 $\mu\text{R/hr}$. The State team performed contact measurements at fifteen locations within the structure with a concentration in Bay 4, the readings are tabulated in Table 2. The first contact measurement was at the North West corner of the building slab, the measurement was used to determine the background levels for the concrete slab in the interior of building T363. This location is the same as used for background measurements by Rocketdyne personnel documented in SSWA-ZR-0002. The measurements were made using a Ludlum model 19 $\mu\text{R/hr}$ meter and an Eberline ESP-2 w/ 44-9 pancake probe. Direct measurements and 100 sq. cm wipe samples were taken at each location, see Table 2. Results of the analysis by the Sanitation and Radiation Laboratory (SRL) are listed in Table 3. Figure 1 shows the sampling locations for Building T363.

Table 1: Background Measurements (North west corner of concrete slab)

Meter	Reading (average)
Ludlum M-19 Rate meter ($\mu\text{R/hr}$)	10 $\mu\text{R/hr}$
Eberline ESP-2 w/ Ludlum 44-9 G-M pancake probe	78.7 cpm

Table 2: Contact Survey Data

Location	cpm (ESP-2 w/ 44-9)	$\mu\text{R/hr}$ (Ludlum M-19)	$\mu\text{R/hr}$ (Ludlum M-19) one meter from surface	Wipe ID #
Bkgd Location	80	9	9	1
Bay 1 - A	55.6	9	9	2
Bay 1 - B	45.7	9	9	*
Bay 2 - A	80.3	11	8	3
Bay 2 - B	61.7	10	10	*
Bay 3 - A	58.0	11	11	*
Bay 3 - B	58.0	11	11	4
Bay 4 - A	75.3	10.5	10	5
Bay 4 - B	96.5	11	11	6
Bay 4 - C	49.4	10	10	7
Bay 4 - D	71.6	11.5	9	11
Bay 4 - E	69.2	12	11	8
Bay 4 - F, wall	58.0	10	10	9
Bay 4 - G, wall	56.0	11	11	10
Room 100	61.7	8	8	15
Room 101	46.9	10	10	13
Room 102	69.2	9	9	14
Room 103	54.3	8.5	9	12

note: * - no wipe sample collected at this location.

Table 3: Sanitation and Radiation Laboratory Analysis of the Wipe Samples

Wipe Id #	Analysis	Reported Results \pm CE pCi/100 cm ²	Calculated Results \pm CE dpm / 100 cm ²
wipe 1 - 15	gamma emitters	N.D.	N.D.
1	gross alpha gross beta	N.D. N.D.	N.D. N.D.
2	gross alpha gross beta	0.3 ± 0.2 N.D.	0.7 ± 0.4 N.D.
3	gross alpha gross beta	N.D. N.D.	N.D. N.D.
4	gross alpha gross beta	0.4 ± 0.3 N.D.	0.9 ± 0.7 N.D.
5	gross alpha gross beta	0.4 ± 0.3 N.D.	0.9 ± 0.7 N.D.
6	gross alpha gross beta	N.D. N.D.	N.D. N.D.
7	gross alpha gross beta	N.D. N.D.	N.D. N.D.
8	gross alpha gross beta	N.D. N.D.	N.D. N.D.
9	gross alpha gross beta	N.D. N.D.	N.D. N.D.
10	gross alpha gross beta	N.D. 0.8 ± 0.4	N.D. 1.8 ± 0.9
11	gross alpha gross beta	N.D. N.D.	N.D. N.D.
12	gross alpha gross beta	N.D. 0.6 ± 0.4	N.D. 1.3 ± 0.9
13	gross alpha gross beta	N.D. N.D.	N.D. N.D.
14	gross alpha gross beta	N.D. N.D.	N.D. N.D.
15	gross alpha gross beta	N.D. N.D.	N.D. N.D.

Survey Results:

The survey results were less than twice background for the surrounding area and the inside of the structure. The results of the contact measurements and the laboratory analysis of the samples collected for Building T363 have activity levels below the acceptable surface contamination levels listed in DECON-1 (Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use).

Building T363 Sample Locations

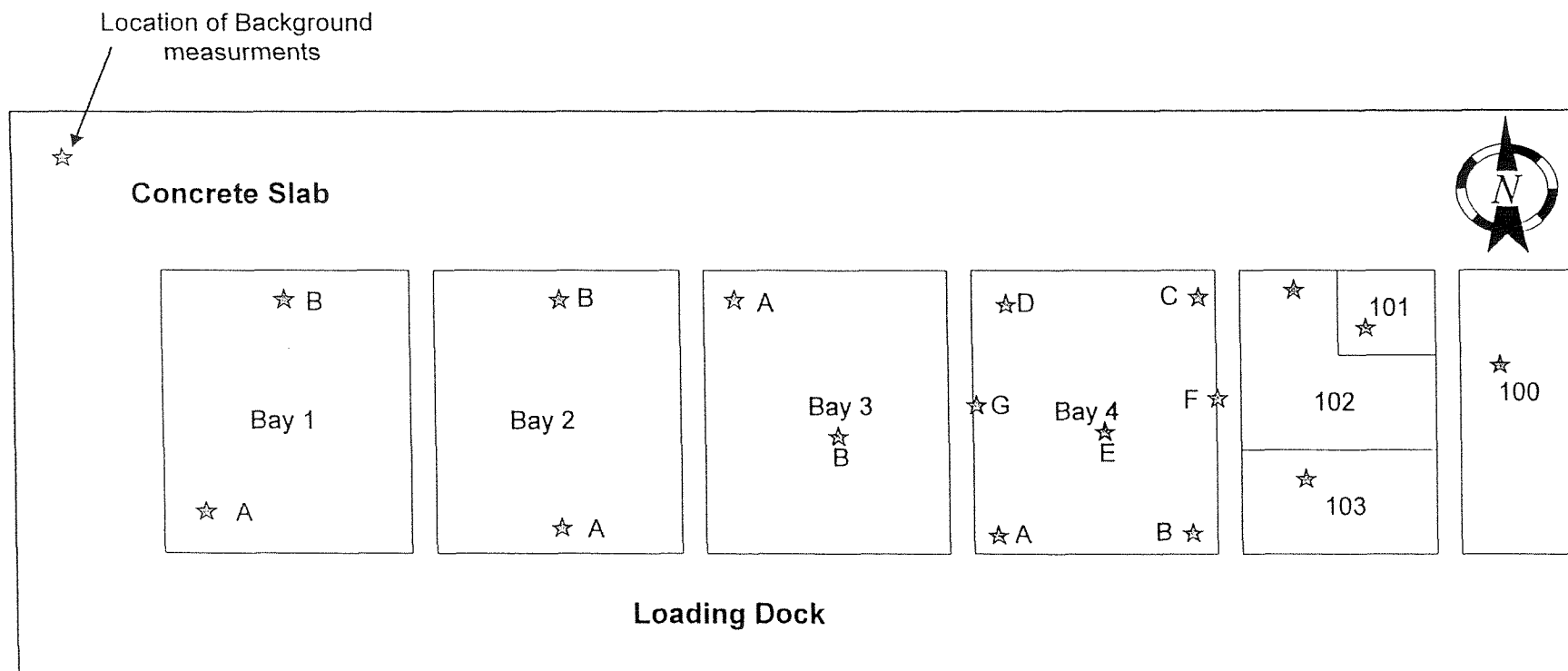


Figure 1: Diagram of Sample locations at Building T363